



Commonwealth of Virginia
Department of Medical Assistance Services

2007 Focused Study Report: Childhood Immunizations

Prepared by



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Virginia's External Quality Review Organization

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Executive Summary

On behalf of the Virginia Department of Medical Assistance Services (DMAS), the Michigan Peer Review Organization conducted a study of immunizations for children in FAMIS and the SCHIP Medicaid Expansion group to assess the extent to which FAMIS children obtained immunizations according to recommended age-specific guidelines. Vaccines are among the most successful and cost-effective public health tools available for preventing disease and death. They not only prevent a vaccinated individual from developing a potentially serious disease, they also help protect entire communities by reducing the spread of infectious agents.

Specifications

To calculate childhood immunization rates, data were abstracted from medical records and combined with administrative data extracted from the State's claims processing system with service dates from the enrollee's birth date through their 2nd birthday. The HEDIS[®] measure applicable to this study is *Childhood Immunization Status (CIS)*. The HEDIS[®] technical specifications provide age-appropriate sets of CPT and ICD-9 codes and instructions regarding continuous enrollment, eligibility, exclusions, and other detailed specifications.

Topic Description

Seven immunizations were considered: measles, mumps, and rubella (MMR); varicella vaccine (VZV); hepatitis B (HBV), haemophilus influenza type B (HiB), inactivated poliovirus (IPV); diphtheria, tetanus, and pertussis vaccine (DTaP); and pneumococcal conjugate vaccine (PCV).

Results

The immunization Combination 2 (combo 2) HEDIS[®] measure is designed to determine what proportion of eligible children received four DTaP; three IPV; one MMR; three HiB; three HBV; and one VZV vaccination on or before the child's second birthday. Combination 3 (combo 3) is designed to determine what proportion of eligible children received all antigens listed in Combination 2 plus four pneumococcal conjugate vaccinations on or before the child's second birthday.¹ Immunization rate increases for both Combinations 2 and 3 were significant, moving Virginia's performance closer to benchmark national averages.

Rates for each individual vaccine increased from 2006 to 2007 with all increases statistically significant, except for the pneumococcal conjugate vaccine (PCV). Table A below provides a summary of the results.

Table A. Summary of 2007 Childhood Immunization Study Results

Study Question	2007 Results
What proportion of enrollees received the following immunizations on or before their second birthday?	The FAMIS combined with FAMIS Plus rates shown below with n=833 are all less than the HEDIS [®] 2008 national Medicaid average, but in several cases (e.g., HiB, MMR, VZV, and PCV), the differences are less than five percentage points.
DTaP (diphtheria, tetanus, pertussis) - 4 doses	71.3% \pm 3.1%
HBV (hepatitis B) - 3 doses	74.8% \pm 2.9%

¹ National Committee for Quality Assurance (NCQA), HEDIS[®] 2007: Vol. 2: Technical Specifications. Washington, DC: NCQA; 2007.

Study Question	2007 Results
HiB (haemophilus influenza type b) - 3 doses	84.5% \pm 2.5%
MMR (measles, mumps, rubella) - 1 dose	85.7% \pm 2.4%
IPV (inactivated poliovirus) - 3 doses	79% \pm 2.8%
VZV (varicella) - 1 dose	84.9% \pm 2.4%
PCV (pneumococcal conjugate) - 4 doses	69.9% \pm 3.1%
What proportion of enrollees received four DTaP vaccinations; three IPV vaccinations; one MMR vaccination; three HiB vaccinations; three hepatitis B vaccinations; and one VZV vaccination on or before their second birthday? (Combination 2)	<p>The Combination 2 immunization rate improved from 2006 to 2007 by nearly 9 percentage points to 62.9% (FAMIS and FAMIS Plus combined).</p> <p>2006 Combination 2 FAMIS rate = 58.4%. 2006 Combination 2 FAMIS Plus rate = 50.8%.</p> <p>2007 Combination 2 FAMIS rate = 64.4%. 2007 Combination 2 FAMIS Plus rate = 61.8%.</p>
What proportion of enrollees received four DTaP vaccinations; three IPV vaccinations; one MMR vaccination; three HiB vaccinations; three hepatitis B vaccinations; one VZV vaccination and four pneumococcal conjugate vaccinations on or before their second birthday? (Combination 3)	<p>The Combination 3 rate improved by nearly 10 percentage points from 2006 to 2007 to 57.3% (FAMIS and FAMIS Plus combined).</p> <p>2006 Combination 3 FAMIS rate = 49.9%. 2006 Combination 3 FAMIS Plus rate = 46.1%.</p> <p>2007 Combination 3 FAMIS rate = 59.5%. 2007 Combination 3 FAMIS Plus rate = 55.6%.</p>

Summary

Challenges to high immunization rates among Medicaid population include inability to locate all documented immunizations, and outdated provider practice patterns. DMAS is encouraged to continue its work with the Virginia Department of Health's Immunization Program to facilitate ongoing and increased use of the Virginia Immunization Registry. MPRO also encourages DMAS to continue its relationship with the Virginia Vaccines for Children Program (VVC). Because rates are increasing, many of the current initiatives already in place may prove to be successful; however, until the rates reach national Medicaid averages, there is still room for improvement.

Chapter 1 – Focused Quality Study Overview

Introduction

The Virginia Department of Medical Assistance Services (DMAS) is responsible for providing healthcare to the thousands of low income children enrolled in Medicaid in the state. DMAS selected five topics for focused studies: Well-Child and Adolescent Well Care, Immunizations; Access to Primary Care Practitioners (PCPs); Use of Appropriate Medications for People with Persistent Asthma; and Prenatal Care. The focused studies reviewed care provided to enrollees in the fee-for-service (FFS), managed care organizations (MCOs), and Primary Care Case Management (PCCM) delivery systems. The majority of Medicaid enrollees (58%) aged zero – 20 years is in FFS, 36% are in MCOs, and the remaining 6% are in PCCM.

This report provides results for the Childhood Immunizations focused study. Study results are provided by delivery system and program. A description of the programs is provided in Appendix A.

Programs

Virginia's State Children's Health Insurance Program (SCHIP), is called the Family Access to Medical Insurance Security (FAMIS), and is authorized under Title XXI of the Social Security Act for low-income people. FAMIS is financed by Federal (65%) and State (35%) funds and administered by the Virginia Department of Medical Assistance Services (DMAS) in accordance with Federal and State guidelines. DMAS created FAMIS in 2001 to provide health insurance coverage to low income children whose families' incomes are too high to qualify for Medicaid. FAMIS covers eligible children (who are not eligible for Medicaid, are not covered under health insurance, and are not members of a family eligible for coverage under the State employee health plan). FAMIS provides coverage to children up to age 19 in households with incomes ranging from 133% to 200% of the federal poverty level (FPL). Enrollee eligibility aid categories 006, 007, 008, 009 are included in the FAMIS program.

Virginia operates a combination SCHIP program that includes a Medicaid Expansion component that is funded under Title XXI. The Medicaid Expansion program covers children ages 6 through 19 in households with incomes ranging from 100% to 133% of FPL (children younger than six years of age within this FPL range are covered by Medicaid). For this study, SCHIP Medicaid Expansion is defined as enrollees in eligibility aid category 094.

FAMIS Plus (Children's Medicaid) is DMAS' designation for children covered under Title XIX of the Social Security Act. FAMIS Plus provides health insurance coverage for children ages 0-19 years from households with incomes ranging from 0% to 100% of the federal poverty limit and for children ages 0-6 years from households with incomes ranging from 100%-133% of FPL. FAMIS Plus includes enrollees from eligibility aid categories 071, 072, 073, 074, 075, 076, 081, 082, 083, 085, 086, 088, 090, 091, 092, 093, 097, 098, and 099.

Delivery Systems

The focused study reviewed care provided to enrollees in FAMIS, FAMIS Plus and SCHIP Medicaid Expansion programs. The focused study used three delivery system classifications to report findings:

1. Fee For Service (FFS) – primary care providers are paid directly by DMAS on a FFS basis
2. Primary Care Case Management (PCCM) Program (MEDALLION) – managed care
3. Managed Care Organizations – recipients are enrolled in one of five MCOs (Medallion II) – managed care

Methodology

Selection Parameters

Table 1 displays the selection parameters used to define the population included in the immunization focused study.

Table 1. Selection Parameters for Immunization Focused Study

Program Types	FAMIS (Enrollee Eligibility Aid Category = 006, 007, 008, 009) SCHIP Medicaid Expansion (Enrollee Eligibility Aid Category = 094) FAMIS Plus (Enrollee Eligibility Aid Category = 071, 072, 073, 074, 075, 076, 081, 082, 083, 085, 086, 088, 090, 091, 092, 093, 097, 098, 099)
Delivery Systems	FFS (Benefit Definition Plan Subprogram Code = 01) PCCM (MEDALLION) (Benefit Definition Plan Subprogram Code = 02, 07) MCO (Medallion II) (Benefit Definition Plan Subprogram Code = 03, 04)
Enrollment Criteria	Minimum of 12 months continuous enrollment prior to the enrollee's second birthday during calendar year 2007 within the same delivery system and program.
Diagnosis	None
Age	Date of birth between January 1, 2005 and December 31, 2005 (i.e. turned 24 months of age during the review period)
Sex	Male, Female
Office Visit Requirement	None
Review Period	Birth to 2 years of age

Sampling and Data Collection

Random samples were selected for the immunization focused study. Enrollees were selected from the FAMIS, SCHIP Medicaid Expansion and FAMIS Plus populations and stratified by delivery system.² Table 2 shows the population, sample selection, and number of abstracted records for the study.

**Table 2. Sample Selection for Immunization Study
(FAMIS + SCHIP Medicaid Expansion + FAMIS Plus)**

Population	Sample	Requested Records	Abstracted Records
24,647	834	784	634

² The FAMIS population cannot elect to enroll in PCCM; however, some enrollees already enrolled in a PCCM in Medicaid or the former SCHIP program can remain in the PCCM program.

To calculate immunization rates data were abstracted from medical records and combined with administrative data extracted from the State's claims processing system with service dates between the child's birth date and 2nd birthday. The HEDIS[®] measure applicable to this study is *Childhood Immunization Status (CIS)*. The HEDIS[®] technical specifications provide age-appropriate sets of CPT and ICD-9 codes and instructions regarding continuous enrollment, eligibility, exclusions, and other detailed specifications.

MPRO developed a data collection tool using clinical guidelines published by the American Academy of Pediatrics (AAP), HEDIS[®] specifications, and input from experts in tool design and health care delivery (see Appendix B). The tool is heavily based on the AAP recommendations for preventive pediatric health care³ and on covered services as detailed in the MCO contract⁴ for FAMIS.

A medical record list was sent to providers requesting submission of medical records for abstraction (see Appendix C for example letter). Nurses abstracted data from medical records, which was then cleaned and analyzed to provide information in this report.

Data Analysis and Statistical Testing

Data analysis was performed using the SAS[™] System for Windows. Rates based on random samples are provided with confidence intervals, indicated by the plus/minus symbol (\pm), providing a measure of the precision of an estimated value. The interval represents the range of values believed to encompass the "true" rate value. Wider intervals indicate lower precision; while narrow intervals indicate greater precision.

Statistical significance is defined as the probability that a result is not likely to be due to chance alone. The possibility of a difference being due solely to chance is expressed as a probability value (*p*-value). A *p*-value of 0.5 was used to determine statistical significance. Throughout the report the term "significant" is used only when referring to results that were evaluated using statistical testing.

The immunization focused study included enrollees in FAMIS and SCHIP Medicaid Expansion for prior years. Enrollees in the FAMIS Plus program are included for the first time in the populations studied for 2007 service dates.

Study Questions

The immunization focused study consisted of study questions derived from criteria and guidelines developed by the Centers for Disease Control (CDC), the Advisory Committee on Immunization Practices (ACIP) and the American Academy of Pediatrics (AAP). The recommendations and format of the childhood and adolescent immunization schedule and catch-up schedule were approved by the Advisory Committee on Immunization Practices (ACIP), the American Academy of Pediatrics (AAP), and the American Academy of Family Physicians (AAFP).⁵ ACIP periodically reviews the recommended childhood and adolescent immunization schedule to ensure that the schedule is current with changes in vaccine formulations and reflects revised recommendations for the use of licensed vaccines, including those newly licensed.

³ Recommendations for Preventive Pediatric Health Care. *American Academy of Pediatrics*. 1995;96:373-374.

⁴ 2007 FAMIS managed care contract – Article II, Section G – 34 "Well Baby and Well Child Care".

⁵ Centers for Disease Control and Prevention. Morbidity and Mortality Weekly Report. Recommended Childhood and Adolescent Immunization Schedule – United States, 2006. January 6, 2006 / 54(52);Q1-Q4.

These three study questions were used to formulate data abstraction indicators and report study results:

1. What proportion of enrollees received the following immunizations on or before their second birthday?
 - DTaP (diphtheria, tetanus, pertussis) - 4 doses
 - HBV (hepatitis B) - 3 doses
 - Hib (Haemophilus influenza type b) - 3 doses
 - MMR (measles, mumps, rubella) - 1 dose
 - IPV (inactivated poliovirus) - 3 doses
 - VZV (Varicella) - 1 dose
 - PCV (pneumococcal conjugate) - 4 doses
2. What proportion of enrollees received four DTaP vaccinations; three IPV vaccinations; one MMR vaccination; three HiB vaccinations; three hepatitis B vaccinations; and one VZV vaccination on or before their second birthday? (Combination 2)
3. What proportion of enrollees received four DTaP vaccinations; three IPV vaccinations; one MMR vaccination; three HiB vaccinations; three hepatitis B vaccinations; one VZV vaccination and four pneumococcal conjugate vaccinations on or before their second birthday? (Combination 3)

Reporting Results

The National Committee on Quality Assurance (NCQA) publishes Quality Compass[®] using audited HEDIS[®] results from health organizations. Quality Compass[®] allows users to conduct competitor analysis, examine quality improvement, and benchmark plan performance. Benchmarks used in this report are from Quality Compass[®] for the Medicaid population for 2007 dates of service.⁶ Non-statistical comparison is made to the national Medicaid HEDIS[®] mean (average) for 2008, which is based on 2007 service dates, referred to in the report as the “HEDIS[®] 2008 national Medicaid average.”

This report compares 2007 rates to rates from prior year studies. Rates for 2004, 2005, 2006, and 2007 are based on the calendar year. The data sources for prior year information are:

- Information for State Fiscal Year 2003 (SFY2003) is from the Commonwealth of Virginia Clinical Study – FAMIS Well-Child Study for State Fiscal Year 2003.
- Information for 2004 is from the Commonwealth of Virginia Clinical Study – FAMIS for 2004.
- Information for 2005 is from MPRO’s FAMIS Focused Study Report – Calendar Year 2005, published in April 2007 as well as the Commonwealth of Virginia Clinical Study Immunization Status at 24 Months and Prenatal Care Study – both produced by DMAS’ previous External Quality Review Organization (EQRO).
- Information for 2006 is from MPRO’s Focused Quality Studies Report – Calendar Year 2006, published in June 2008.

⁶ The source for data contained in this publication is Quality Compass[®] 2008 and is used with the permission of the NCQA. Any analysis, interpretation, or conclusion based on these data is solely that of the authors, and NCQA specifically disclaims responsibility for any such analysis, interpretation, or conclusion. Quality Compass[®] is a registered trademark of NCQA.

Chapter 2 – Focused Study Results

Introduction

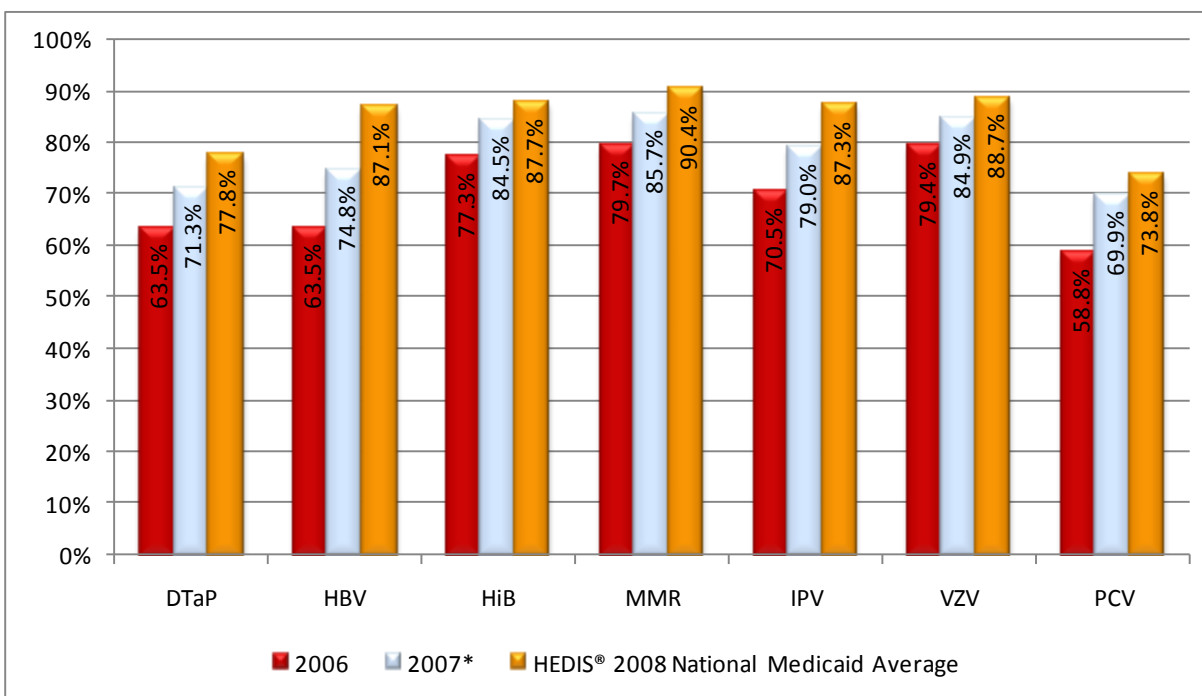
Vaccines are among the most successful and cost-effective public health tools available for preventing disease and death. They not only prevent a vaccinated individual from developing a potentially serious disease, but they also help protect the entire community by reducing the spread of infectious agents.

This study of immunizations for children in FAMIS and the SCHIP Medicaid Expansion group assesses the extent to which FAMIS children obtained immunizations according to recommended age-specific guidelines. The Healthy Virginians' 2010 goal is to reduce the number of indigenous cases of vaccine-preventable diseases.

Focused Study Results

Overall immunization rates are presented in Figure 1 below which shows the percentage of enrollees who received required vaccinations on or before their second birthday. Rates for each individual vaccine increased from 2006 to 2007. Statistical testing showed all of the increases, except for pneumococcal conjugate (PCV), to be significant. Vaccines for MMR, VZV, and HiB were given the most often, followed by IPV, HBV, DTaP, and PCV. The higher rates for MMR and VZV are expected as only one dose of each of the vaccines is required. DTaP and PCV rates were about 15 percentage points less than rates for most other vaccines; these are the two vaccines that require four doses to meet guidelines.

Figure 1. Overall Immunization Rates



* 2007 includes FAMIS + FAMIS Plus; 2006 included only FAMIS.

Description of Vaccines

A brief description of childhood vaccines is provided below for reference. The vaccines are grouped in this section by the required number of doses children should receive on or before their second birthday.

MMR is a combination vaccine recommended for children and adults to prevent measles (rubeola) mumps and German measles (rubella). Varicella vaccine is a live-virus vaccine. The childhood immunization schedule recommends at least one MMR (measles, mumps, and rubella) and one Varicella (VZV) vaccination with a date of service on or before the child's second birthday.

Hepatitis B (HBV) vaccines should be given in three doses, with the second dose 1-2 months after dose 1, and the third dose 4-6 months after dose 1. Three hepatitis B vaccinations, with different dates of service on or before the enrollees' second birthday are recommended. The HiB immunization is designed to prevent diseases caused by Haemophilus influenza type B (HiB), bacteria responsible for a range of serious "invasive" diseases including meningitis with potential brain damage and epiglottitis with airway obstruction. IPV is the inactivated poliovirus, provided to prevent polio. Three HiB vaccines and at least three polio vaccinations with different dates of service on or before the child's second birthday should be administered.

The diphtheria, tetanus, and pertussis vaccine (DTaP) can help prevent these diseases. Most children who are vaccinated with DTaP will be protected throughout childhood. DTaP is a safer version of an older vaccine called DTP which is no longer used in the United States.

Pneumococcal conjugate vaccine (PCV) protects against pneumococcal infection, which causes severe disease in children under five years old. Pneumococcal infections can also lead to other health problems, including pneumonia, deafness, and brain damage. Children under 2 years are at highest risk for serious disease. In July of 2006, Virginia mandated pneumococcal conjugate vaccine for children in day care. Four doses of DTaP and PCV vaccines should be given on or before a child's second birthday.

Contraindications for vaccinations may include anaphylactic reaction to the vaccine or its components, or other documented history of illness or seropositive results (showing a significant level of serum antibodies, or other immunologic marker in the serum, indicating previous exposure to the infectious agent being tested). Enrollees with documented contraindications for a vaccine were not included in the denominator.

Study Question # 1

What proportion of enrollees received the following immunizations on or before their second birthday?

- DTaP (diphtheria, tetanus, pertussis) - 4 doses
- HBV (hepatitis B) - 3 doses
- HiB (Haemophilus influenza type b) - 3 doses
- MMR (measles, mumps, rubella) - 1 dose
- IPV (inactivated poliovirus) - 3 doses
- VZV (Varicella) - 1 dose
- PCV (pneumococcal conjugate) - 4 doses

When reporting hybrid data, HEDIS[®] methodology specifies the organization may not substitute from a measure members who are noncompliant because they refused the service or because the organization is unable to locate the medical record, thus zeroes are entered in the numerator for cases for which no medical record was provided. Exceptions to the substitution requirements are 1) if chart review reveals the member was included in error and does not meet the eligibility criteria for inclusion in the sample; 2) discovery that a member has a valid exclusion to the treatment being measured; and 3) discovery that an organization employee or dependent has been selected for the sample and that employee or dependent's medical record must be reviewed to determine compliance with the measure.

The HEDIS[®] substitution methodology was used in reporting 2006 rates and 2007 rates. However, the rates reported for 2005 were based solely on abstracted records; consequently, rates for 2005 will be “overstated” relative to subsequent years. Additionally, the increase for PCV rates from 2005 to 2006 are likely a result of the ACIP and AAP recommendations in December 2006 that influenza immunization be provided to infants over six months old.⁷

The fourth column in Table 3 below provides immunization rates for only the FAMIS program in order to accommodate a more equitable comparison to 2006. These “FAMIS Only” rates reflect increases from 2006 to 2007 of an even higher magnitude than the rates calculated for 2007 that include the FAMIS and FAMIS Plus populations. The FAMIS combined with FAMIS Plus rates shown in the 2007 column with n=833 are all less than the HEDIS[®] 2008 national Medicaid average, but in several cases (e.g., HiB, MMR, VZV, and PCV), the differences are less than five percentage points.

Table 3. Individual Immunization Rate Comparison by Year

Vaccine	2005*	2006	FAMIS Only 2007 (n=351)	FAMIS and FAMIS Plus 2007 (n=833)	HEDIS [®] 2008 National Medicaid Average
Diphtheria, tetanus, pertussis (DTaP)	92.0% ± 5.0%	63.5% ± 5.1%	73.2%	71.3% ± 3.1%	77.8%
Hepatitis B (HBV)	93.0% ± 5.0%	63.5% ± 5.1%	74.1%	74.8% ± 2.9%	87.1%
Haemophilus influenza type b (HiB)	96.0% ± 5.0%	77.3% ± 4.5%	84.3%	84.5% ± 2.5%	87.7%
Measles, mumps, rubella (MMR)	95.7% ± 5.0%	79.7% ± 4.3%	84.9%	85.7% ± 2.4%	90.4%
Inactivated poliovirus (IPV)	95.5% ± 5.0%	70.5% ± 4.9%	79.8%	79% ± 2.8%	87.3%
Varicella (VZV)	97.0% ± 5.0%	79.4% ± 4.3%	82.6%	84.9% ± 2.4%	88.7%
Pneumococcal conjugate (PCV)	59.9% ± 5.0%	58.8% ± 5.2%	70.7%	69.9% ± 3.1%	73.8%

* Calculation did not include records not received.

⁷ Centers for Disease Control and Prevention. Morbidity and Mortality Weekly Report. Recommended Childhood and Adolescent Immunization Schedule - United States, 2006. January 6, 2006 / 54(52); Q1-Q4.

The 2007 rates for the individual immunizations by delivery system are provided in Table 4. The differences between the individual immunization rates for the MCO enrollees versus those in FFS were significant. Rates for MCO enrollees compared to enrollees in the PCCM program were significantly lower for HiB, MMR, VZV and PCV. Rates for enrollees in FFS were significantly lower than the rates for the MCO and PCCM enrollees for all seven immunizations.

Table 4. Individual Immunization Rates for 2007 by Delivery System

Vaccine	MCO	FFS	PCCM
Diphtheria, tetanus, pertussis (DTaP)	75.8%	61.7%	80.0%
Hepatitis B (HBV)	80.7%	62.9%	84.7%
Haemophilus influenza type b (HiB)	87.0%	76.3%	94.2%
Measles, mumps, rubella (MMR)	88.2%	77.6%	95.3%
Inactivated poliovirus (IPV)	84.8%	67.9%	87.9%
Varicella (VZV)	88.2%	75.4%	95.3%
Pneumococcal conjugate (PCV)	73.6%	58.6%	82.6%

Study Question # 2

What proportion of enrollees received four DTaP vaccinations; three IPV vaccinations; one MMR vaccination; three HiB vaccinations; three (3) hepatitis B vaccinations; and one (VZV) Varicella vaccination on or before their second birthday? (Combination 2)

Study Question # 3

What proportion of enrollees received four DTaP vaccinations; three IPV vaccinations; one MMR vaccination; three HiB vaccinations; three (3) hepatitis B vaccinations; one (VZV) Varicella vaccination and four pneumococcal conjugate vaccinations on or before their second birthday? (Combination 3)

The second and third study questions address immunization rates designated as “Combination 2” and “Combination 3” by NCQA for HEDIS[®] reporting. Combination 2 measures if children received four DTaP; three IPV; one MMR; three HiB; three hepatitis B; and one VZV vaccination on or before the child’s second birthday. Combination 3 measures if children received all antigens listed in Combination 2 and four pneumococcal conjugate vaccinations on or before the child’s second birthday.⁸

The Combination 2 immunization rate improved from 2006 to 2007 by nearly 9 percentage points and the Combination 3 rate improved by nearly 10 percentage points for the same periods. Both of these increases were statistically significant. These rates are shown in Table 5 below, followed by Table 6 which displays the rates by the three delivery systems. There was a greater variation across delivery systems in 2007 than in 2006, with rates ranging from 52.0% to 72.1% in 2007, but by only two percentage points in 2006. This also held true for Combination 3 rates. Rates for enrollees in PCCM were highest, followed by MCO, and then FFS.

⁸ National Committee for Quality Assurance (NCQA), HEDIS[®] 2007: Vol. 2: Technical Specifications. Washington, DC: NCQA; 2007.

Table 5. Combination Immunization Rate Comparison by Year

Vaccine	2005*	2006 (n=821)	2007 (n=833)	HEDIS® 2008 National Medicaid Average
Combination 2	88.0% ± 5.0%	54.0% ± 5.3%	62.9% ± 3.3%	72.1%
Combination 3	57.1% ± 5.0%	47.6% ± 5.3%	57.3% ± 3.4%	65.4%

Table 6. Combination Immunization Rate Comparison by Delivery System and Year

	2006			2007		
	MCO	FFS	PCCM	MCO	FFS	PCCM
Combination 2	82.7%	80.9%	78.1%	68.3%	52.0%	72.1%
Combination 3	71.7%	71.7%	71.4%	63.0%	46.1%	66.3%

The Combination 2 immunization rates improved by 6 percentage points from 2006 to 2007 for the FAMIS program and improved significantly for the FAMIS Plus and combined (FAMIS and FAMIS Plus) programs. The variation between FAMIS and FAMIS Plus rates in 2006 was 7.6 percentage points. There was a reduced variation between the two programs in 2007 which had a 3.6 percentage point difference, as shown in Table 7 below.

There was a variation of 3.9 percentage points in the Combination 3 immunization rates between the FAMIS and FAMIS Plus programs in 2007. Combination 3 rates for FAMIS and FAMIS Plus improved significantly from 2006 to 2007. There were 10 percentage point increases for the FAMIS, FAMIS Plus, and combined (FAMIS and FAMIS Plus) rates from 2006 to 2007 for Combination 3.

Table 7. Combination Immunization Rate Comparison by Program and Year

Vaccine	2006			2007		
	FAMIS	FAMIS PLUS	FAMIS and FAMIS Plus	FAMIS	FAMIS Plus	FAMIS and FAMIS Plus
Combination 2	58.4% ± 5.3%	50.8% ± 4.5%	54.0% ± 3.4%	64.4% ± 5.0%	61.8% ± 4.3%	62.9% ± 3.3%
Combination 3	49.9% ± 5.3%	46.1% ± 4.5%	47.6% ± 3.4%	59.5% ± 5.1%	55.6% ± 4.4%	57.3% ± 3.4%

Summary and Conclusions

Immunization rate increases for both Combination 2 and 3 were significant, moving Virginia's performance closer to benchmark national averages. Interventions to improve immunization rates are effective, yet a commitment to maintain the achieved goals and continuing to reach for higher targets is necessary if Virginia is to reach CDC's 2010 goal of achieving and maintaining childhood immunizations at 90%. Table 8 provides a summary of the results from the study.

Table 8. Summary of 2007 Childhood Immunization Study Results

Study Question	2007 Results
What proportion of enrollees received the following immunizations on or before their second birthday?	The FAMIS combined with FAMIS Plus rates shown below with n=833 are all less than the HEDIS® 2008 national Medicaid average, but in several cases (e.g., HiB, MMR, VZV, and PCV), the differences are less than five percentage points.
DTaP (diphtheria, tetanus, pertussis) - 4 doses	71.3% ± 3.1%
HBV (hepatitis B) - 3 doses	74.8% ± 2.9%
HiB (haemophilus influenza type b) - 3 doses	84.5% ± 2.5%
MMR (measles, mumps, rubella) - 1 dose	85.7% ± 2.4%
IPV (inactivated poliovirus) - 3 doses	79% ± 2.8%
VZV (varicella) - 1 dose	84.9% ± 2.4%
PCV (pneumococcal conjugate) - 4 doses	69.9% ± 3.1%
What proportion of enrollees received four DTaP vaccinations; three IPV vaccinations; one MMR vaccination; three HiB vaccinations; three hepatitis B vaccinations; and one VZV vaccination on or before their second birthday? (Combination 2)	<p>The Combination 2 immunization rate improved from 2006 to 2007 by nearly 9 percentage points to 62.9% (FAMIS and FAMIS Plus combined).</p> <p>2006 Combination 2 FAMIS rate = 58.4%. 2006 Combination 2 FAMIS Plus rate = 50.8%.</p> <p>2007 Combination 2 FAMIS rate = 64.4%. 2007 Combination 2 FAMIS Plus rate = 61.8%.</p>
What proportion of enrollees received four DTaP vaccinations; three IPV vaccinations; one MMR vaccination; three HiB vaccinations; three hepatitis B vaccinations; one VZV vaccination and four pneumococcal conjugate vaccinations on or before their second birthday? (Combination 3)	<p>The Combination 3 rate improved by nearly 10 percentage points from 2006 to 2007 to 57.3% (FAMIS and FAMIS Plus combined).</p> <p>2006 Combination 3 FAMIS rate = 49.9%. 2006 Combination 3 FAMIS Plus rate = 46.1%.</p> <p>2007 Combination 3 FAMIS rate = 59.5%. 2007 Combination 3 FAMIS Plus rate = 55.6%.</p>

Rates for each individual vaccine increased significantly from 2006 to 2007 for all vaccines except for the pneumococcal conjugate (PCV). The combination rates cannot, by definition, exceed the individual rates; therefore, improvements in the lowest individual immunization rates will drive combination rate increases. Diphtheria, tetanus, pertussis (DTaP) and PCV vaccines show the lowest rates for 2007 at 71.3% and 69.9%, respectively. Increases in DTaP and PCV will yield improvements in combination rates.

Opportunities for Improvement

In areas where children receive immunizations from varied sources including public health clinics, it can be challenging to collect and document evidence of immunization status for the purpose of a study. For this reason, DMAS is encouraged to continue its work with the Virginia Department of Health's Immunization Program to facilitate ongoing and increased use of the Virginia Immunization Registry. DMAS is also encouraged to continue its relationship with the Virginia Vaccines for Children Program (VVFC). VVFC provides federally purchased vaccines, at no cost, to qualifying health care providers (e.g., health departments, federally qualified health centers, and rural health clinics) for administration to eligible children – including Medicaid enrollees.⁹

In addition, many practitioners often withhold scheduled shots from children with colds or ear infections. This practice is no longer supported by clinical practice guidelines, but often continues by habit with many practitioners. These missed opportunities can also contribute to lower immunization rates among children.

Because rates are increasing, many of the current initiatives already in place may prove to be successful; however, until the rates reach national Medicaid averages, there is still room for improvement. DMAS should be encouraged by these advances and stand steadfast in its commitment to reach national benchmarks.

⁹ Virginia Vaccines for Children: Summary Page. Virginia Department of Health. Updated May 20, 2008.

Appendices

Appendix A – Description of Programs

Appendix B – Childhood Immunization Focused Study Abstraction Tool

Appendix C – Medical Record Request Letters

Appendix C – Medical Record Request Letters

Appendix A – Description of Programs

Medicaid Programs: Medicaid, FAMIS, and FAMIS Plus

DMAS is the single state agency in the Commonwealth of Virginia that administers Medicaid including FAMIS, Medicaid Expansion and Medicaid/FAMIS Plus programs.

FAMIS

DMAS administers the Virginia State Children’s Health Insurance Program (SCHIP), known as “Family Access to Medical Insurance Security” (FAMIS), under Title XXI of the Social Security Act for low-income people. FAMIS was created in 2001 to ensure that a greater number of children could gain access to health insurance. FAMIS covers eligible children (who are not eligible for Medicaid, are not covered under health insurance, and are not members of a family eligible for coverage under the state employee health plan) from birth through age 18 in families with a gross income at or below 200% of the Federal Poverty Level.

FAMIS provides a comprehensive benefits package that includes well-child care and preventive services. Although FAMIS has cost sharing, FAMIS enrollees who are in MCOs will have only nominal co-payments. Cost sharing does not exceed 5% of a family’s gross income for families with incomes from 150% to 200% of poverty, and is not required for well-child and preventive services. Cost sharing does not exceed 2.5% of gross income for families with incomes below 150% of poverty. Some children who live in areas where MCOs are not available access their care through FAMIS FFS. There is no cost sharing for clients in FAMIS FFS. Children enrolled in FAMIS, are enrolled in MCOs, if available in their locality.

SCHIP Medicaid Expansion

Operated under Title XXI of the Social Security Act, the SCHIP Medicaid Expansion program is for children aged six through 19 years in households with incomes ranging from 100% to 133% of the Federal Poverty Limit (children younger than six are covered by Medicaid).

Medicaid/FAMIS Plus

Medicaid/FAMIS Plus is for children aged 0 to 19 years in households with incomes ranging from 0% to 133% of the Federal Poverty Limit. The program is operated by DMAS under Title XIX of the Social Security Act.

Delivery Systems: FFS and Managed Care (MCO and PCCM)

DMAS provides Medicaid to individuals through two general care delivery models: a model utilizing contracted managed care organizations (MCO) to coordinate care; and a fee-for-service (FFS) model, the standard Medicaid program whereby service providers are reimbursed directly by DMAS. DMAS oversees the development, implementation, and operation of the managed care and FFS programs. Mandatory managed care operates under a CMS 1915(b) Waiver and in accordance with the Code of Federal Regulations. There are currently two Medicaid managed care options:

1. **MEDALLION** is a primary care case management program (PCCM) delivered through DMAS. In MEDALLION, a recipient’s health care is managed by a primary care provider (PCP). The PCP manages the recipient’s health care and acts as a gatekeeper for specialty service referrals. Providers are reimbursed on a FFS basis for all covered services rendered.

2. **Medallion II** is a program that delivers care through MCOs under contract with DMAS. In most areas of the Commonwealth, qualified Medicaid recipients choose between at least two contracted MCOs. In areas where only one contracted MCO participates, recipients have the choice of the MEDALLION PCCM or the Medallion II program. Under Medallion II, the contracted MCO receives a capitated payment that covers a comprehensive set of services, regardless of how much care is used by the recipient. The MCOs accept full financial risk for each recipient's health care.

Appendix B – Childhood Immunization Focused Study Abstraction Tool

Selection Parameters	
Programs	FAMIS (Enrollee Eligibility Aid Category = 006, 007, 008, 009) Medicaid/FAMIS Plus (Enrollee Eligibility Aid Category = 071 – 076, 081 – 083, 085, 086, 088, 090 – 093, 097 – 099)
Delivery Systems	FFS (Benefit Definition Plan Subprogram Code = 01) PCCM (Medallion I) (Benefit Definition Plan Subprogram Code = 02, 07) MCO (Medallion II) (Benefit Definition Plan Subprogram Code = 03, 04)
Enrollment Criteria	Minimum of 12 months continuous enrollment prior to the enrollee's second birthday during calendar year 2006 within the same delivery system and program.
Age	Date of birth between January 1, 2005 and December 31, 2005 (i.e. turned 24 months years of age during the review period)
Sex	Male, Female
Office Visit Requirement	None

Study Questions

- What proportion of enrollees received the following immunizations on or before their second birthday?
 - DTaP (diphtheria, tetanus, pertussis) - 4 doses
 - HBV (hepatitis B) - 3 doses
 - Hib (Haemophilus influenza type b) - 3 doses
 - MMR (measles, mumps, rubella) - 1 dose
 - IPV (injected polio vaccine) - 3 doses
 - VZV (Varicella) - 1 dose
 - PCV (pneumococcal conjugate) - 4 doses
- What proportion of enrollees received four DTaP vaccinations; three IPV vaccinations; one MMR vaccination; three HiB vaccinations; three (3) hepatitis B vaccinations; and one (VZV) Varicella vaccination on or before their second birthday? (Combination 2)
- What proportion of enrollees received four DTaP vaccinations; three IPV vaccinations; one MMR vaccination; three HiB vaccinations; three (3) hepatitis B vaccinations; one (VZV) Varicella vaccination and four pneumococcal conjugate vaccinations on or before their second birthday? (Combination 3)

DEMOGRAPHIC INFORMATION				
Item #	Description	Response	Sources	Instructions
1.01	Enrollee ID	Preloaded from enrollment file	Preloaded	Assume preloaded information is correct
1.02	Enrollee Last Name	Outside or inside flap of medical record; copy of insurance card, face sheet, data demographic sheet.	Preloaded and optional entry	If last name documented in the medical record is different from the preloaded last name, record the last name from the medical record. Check other information such as date of birth to confirm you have the right person.
1.03	Enrollee First Name	Outside or inside flap of medical record; copy of insurance card, face sheet, data demographic sheet.	Preloaded and optional entry	If first name documented in the medical record is different from the preloaded first name, record the first name from the medical record. Check other information such as date of birth to confirm you have the right person.
1.04	Enrollee Middle Initial	Preloaded from enrollment file	Preloaded	Assume preloaded information is correct
1.05	Enrollee Sex	Preloaded from enrollment file	Preloaded	Assume preloaded information is correct

DEMOGRAPHIC INFORMATION				
1.06	Enrollee Birth Date	Face sheet, data demographic sheet, labeled outside of the medical record, copy of drivers license.	Preloaded and optional entry	If birth date documented in the medical record is different from the preloaded birth date, record the birth date from the medical record. Check other information such as demographics to make sure you have the right person. It could be another person with the same name.
1.07	Delivery System	Preloaded from enrollment file	Preloaded	Assume preloaded information is correct
1.08	Program	Preloaded from enrollment file	Preloaded	Assume preloaded information is correct

IMMUNIZATIONS				
Item #	Description	Response	Sources	Instructions
2.01	Document the enrollee's DTaP immunization status.	<ul style="list-style-type: none"> DTaP #1 mm/dd/yyyy DTaP #2 mm/dd/yyyy DTaP #3 mm/dd/yyyy DTaP #4 mm/dd/yyyy Immunization contraindicated Refused- mm/dd/yyyy None 	History & physical, well child forms, problem lists, check lists, graphs, and progress notes. Also immunization records & Virginia Immunization Information system (VIIS) sheets.	<p>The DTaP is a 3-in-1 vaccine that protects against diphtheria, pertussis and tetanus. It can be given to children less than 7 years old. The fourth dose of DtaP may be administered as early as 12 months, provided 6 months have elapsed since the third dose.</p> <p>DTaP recommended immunization schedule should include an initial DTaP vaccination followed by at least three DTaP's immunizations with different dates of service on or before the child's second birthday.</p> <p>Contraindications for vaccinations may include anaphylactic reaction to the vaccine or its components, or other documented history of illness.</p> <ul style="list-style-type: none"> Documentation only stating that the enrollee is "up to date" with all immunizations, but does not list the dates of all immunizations and the names of the immunization agents does not constitute sufficient evidence. Also, the requirement of four acellular pertussis vaccines for the DTaP antigen must be noted. DTP vaccinations are no longer manufactured, but notations of DTP in medical record can be noted. Use SHIFT X if date field not documented
2.02	Document the enrollee's HiB status.	<ul style="list-style-type: none"> HiB # 1 mm/dd/yyyy HiB # 2 mm/dd/yyyy HiB # 3 mm/dd/yyyy HiB # 4 mm/dd/yyyy Immunization contraindicated Refused- mm/dd/yyyy None 	History & physical, well child forms, problem lists, check lists, graphs, and progress notes. Also immunization records & Virginia Immunization Information system (VIIS) sheets.	<p>The HiB immunization is designed to prevent diseases caused by Haemophilus influenza type B (HiB), bacteria responsible for a range of serious "invasive" diseases including meningitis with potential brain damage and epiglottitis with airway obstruction.</p> <p>Three H influenza type B (HiB) vaccinations, with different dates of service on or before the child's second birthday are recommended.</p> <p>Contraindications for vaccinations may include anaphylactic reaction to the vaccine or its components, or other documented history of illness.</p> <p>Use SHIFT X if date field not documented.</p> <p>Documentation only stating that the enrollee is "up</p>

IMMUNIZATIONS				
Item #	Description	Response	Sources	Instructions
				to date" with all immunizations, but does not list the dates of all immunizations and the names of the immunization agents does not constitute sufficient evidence.
2.03	Document the enrollee's MMR status.	<ul style="list-style-type: none"> MMR # 1 mm/dd/yyyy MMR # 2 mm/dd/yyyy Measles seropositive result test mm/dd/yyyy Mumps seropositive result test mm/dd/yyyy Rubella seropositive result test mm/dd/yyyy Immunization contraindicated Refused-mm/dd/yyyy None 	History & physical, well child forms, problem lists, check lists, graphs, and progress notes. Also immunization records & Virginia Immunization Information system (VIIS) sheets.	<p>MMR is a combination vaccine recommended for children and adults to prevent measles (rubeola) mumps and German measles (rubella).</p> <p>At least one measles, mumps and rubella (MMR) vaccination is recommended with a date of service falling on or before the child's second birthday.</p> <p>Contraindications for vaccinations may include anaphylactic reaction to the vaccine or its components, or other documented history of illness or seropositive test (showing a significant level of serum antibodies, or other immunologic marker in the serum, indicating previous exposure to the infectious agent being tested).</p> <p>Use SHIFT X if date field not documented.</p> <p>Documentation only stating that the enrollee is "up to date" with all immunizations, but does not list the dates of all immunizations and the names of the immunization agents does not constitute sufficient evidence.</p>
2.04	Document the enrollee's IPV status.	<ul style="list-style-type: none"> IPV #1 mm/dd/yyyy IPV # 2 mm/dd/yyyy IPV # 3 mm/dd/yyyy Immunization contraindicated Refused- mm/dd/yyyy None 	History & physical, well child forms, problem lists, check lists, graphs, and progress notes. Also immunization records & Virginia Immunization Information system (VIIS) sheets.	<p>There is a strong recommendation that all children be vaccinated with Inactivated Poliovirus (IPV). At least three polio vaccinations (IPV) with different dates of service on or before the child's second birthday should be administered.</p> <p>Contraindications for vaccinations may include anaphylactic reaction to the vaccine or its components, or other documented history of illness.</p> <p>Use SHIFT X if date field not documented</p> <p>Documentation only stating that the enrollee is "up to date" with all immunizations, but does not list the dates of all immunizations and the names of the immunization agents does not constitute sufficient evidence.</p>
2.05	Document the enrollee's Hepatitis B status.	<ul style="list-style-type: none"> Hep B # 1 mm/dd/yyyy Hep B # 2 mm/dd/yyyy Hep B # 3 mm/dd/yyyy Hep B seropositive result mm/dd/yyyy Immunization contraindicated Refused-mm/dd/yyyy None 	History & physical, well child forms, problem lists, check lists, graphs, and progress notes. Also immunization records & Virginia Immunization	<p>Hepatitis B vaccines should be given in three doses, with the second dose 1-2 months after dose 1, and the third dose 4-6 months after dose 1. In childhood immunizations three hepatitis B vaccinations, with different dates of service on or before the enrollees' second birthday is acceptable.</p> <p>Contraindications for vaccinations may include anaphylactic reaction to the vaccine or its components, or other documented history of illness or seropositive test (showing a significant level of</p>

IMMUNIZATIONS				
Item #	Description	Response	Sources	Instructions
			Information system (VIIS) sheets.	<p>serum antibodies, or other immunologic marker in the serum, indicating previous exposure to the infectious agent being tested).</p> <p>Use SHIFT X if date field not documented</p> <p>Documentation only stating that the enrollee is "up to date" with all immunizations, but does not list the dates of all immunizations and the names of the immunization agents does not constitute sufficient evidence.</p>
2.06	Document the enrollee's PCV status.	<ul style="list-style-type: none"> ▪ PCV # 1 mm/dd/yyyy ▪ PCV # 2 mm/dd/yyyy ▪ PCV # 3 mm/dd/yyyy ▪ PCV # 4 mm/dd/yyyy ▪ Immunization contraindicated ▪ Refused-mm/dd/yyyy ▪ None 	History & physical, well child forms, problem lists, check lists, graphs, and progress notes. Also immunization records & Virginia Immunization Information system (VIIS) sheets.	<p>Pneumococcal conjugate vaccine is approved for infants and toddlers. Protection lasts at least 3 years, so children who are vaccinated when they are infants will be protected when they are at greatest risk for serious disease.</p> <p>Childhood immunization schedule is at least four pneumococcal conjugate vaccinations on or before the enrollee's second birthday.</p> <p>Contraindications for vaccinations may include anaphylactic reaction to the vaccine or its components, or other documented history of illness.</p> <p>Use Shift X if date field not documented.</p> <p>Documentation only stating that the enrollee is "up to date" with all immunizations, but does not list the dates of all immunizations and the names of the immunization agents does not constitute sufficient evidence.</p>
2.07	Document the enrollee's Varicella status.	<ul style="list-style-type: none"> ▪ VZV #1 mm/dd/yyyy ▪ History of Varicella (chicken pox) mm/dd/yyyy ▪ VZV seropositive result-mm/dd/yyyy ▪ Immunization contraindicated ▪ Refused-mm/dd/yyyy ▪ None 	History & physical, well child forms, problem lists, check lists, graphs, and progress notes. Also immunization records & Virginia Immunization Information system (VIIS) sheets.	<p>Varicella vaccine is a live-virus vaccine.</p> <p>Childhood immunization schedule is at least one Varicella (VZV) vaccination (VZV), with the date of service falling on or before the enrollee's second birthday.</p> <p>Contraindications for vaccinations may include anaphylactic reaction to the vaccine or its components, or other documented history of illness or seropositive test (showing a significant level of serum antibodies, or other immunologic marker in the serum, indicating previous exposure to the infectious agent being tested).</p> <p>Use SHIFT X if date field not documented</p> <p>Documentation only stating that the enrollee is "up to date" with all immunizations, but does not list the dates of all immunizations and the names of the immunization agents does not constitute sufficient evidence.</p>
2.08	Document the	<ul style="list-style-type: none"> ▪ Hepatitis A #1 mm/dd/yyyy 	History & physical, well	Hepatitis A vaccination is recommended for all children at 1 year of age (i.e. 12-23 months). The

Item #	IMMUNIZATIONS			
	Description	Response	Sources	Instructions
	enrollee's Hepatitis A status.	<ul style="list-style-type: none"> Hepatitis A #2 mm/dd/yyyy Hepatitis A seropositive result mm/dd/yyyy Immunization contraindicated Refused-mm/dd/yyyy None 	child forms, problem lists, check lists, graphs, and progress notes. Also immunization records & Virginia Immunization Information system (VIIS) sheets.	<p>second dose in the series should be administered at least 6 months apart.</p> <p>Contraindications for vaccinations may include anaphylactic reaction to the vaccine or its components, or other documented history of illness or seropositive test (showing a significant level of serum antibodies, or other immunologic marker in the serum, indicating previous exposure to the infectious agent being tested).</p> <p>Use SHIFT X if date field not documented</p> <p>Documentation only stating that the enrollee is "up to date" with all immunizations, but does not list the dates of all immunizations and the names of the immunization agents does not constitute sufficient evidence.</p> <p>Childhood & Adolescent Immunization schedule for 2006 approved by the Advisory Committee in Immunization Practices, (ACIP), American Academy of Pediatrics (AAP) and the American Academy of Family Physicians (AAFP)</p>
2.09	Document the enrollee's Influenza vaccination status.	<ul style="list-style-type: none"> Influenza vaccination mm/dd/yyyy Immunization contraindicated Refused-mm/dd/yyyy None 	History & physical, well child forms, problem lists, check lists, graphs, and progress notes. Also immunization records & Virginia Immunization Information system (VIIS) sheets.	<p>Influenza vaccine is recommended annually for children aged ≥ 6 months with certain risk factors (including, but not limited to, asthma, cardiac disease, sickle cell disease, human immunodeficiency virus (HIV), diabetes, and conditions that can compromise respiratory function or respiratory secretions or can increase the risk for aspiration. In addition, healthy children aged 6-23 mos. and close contacts of healthy children aged 0-5 mos. are recommended to receive influenza vaccine because children in this age group are at substantially increased risk for influenza related hospital admissions.</p> <p>Contraindications for vaccinations may include anaphylactic reaction to the vaccine or its components, or other documented history of illness or seropositive test (showing a significant level of serum antibodies, or other immunologic marker in the serum, indicating previous exposure to the infectious agent being tested).</p> <p>Use SHIFT X if date field is not documented</p> <p>Childhood & Adolescent Immunization schedule for 2006 approved by the Advisory Committee in Immunization Practices, (ACIP), American Academy of Pediatrics (AAP) and the American Academy of Family Physicians (AAFP)</p>

Appendix C – Medical Record Request Letters



22670 Haggerty Road, Suite 100, Farmington Hills, MI 48335-2611 • (248) 465-7300 • Fax (248) 465-7428 • www.mpro.org

July 3, 2008

[HMO inside address]

Dear [HMO contact],

MPRO serves as the External Quality Review Organization (EQRO) for the Department of Medical Assistance Services (DMAS) in the Commonwealth of Virginia. MPRO is conducting a number of focused studies to evaluate care provided to Medicaid and FAMIS enrollees. Two of the studies, childhood immunizations and well-child visits, are being conducted using the hybrid methodology, similar to the 2008 HEDIS technical specifications. Therefore, we need your help with achieving a high response rate to the medical record requests for your Medicaid enrollees. The medical records will be abstracted by MPRO. The relevant administrative data has already been provided by DMAS to MPRO for the studies.

MPRO is authorized to request medical records on behalf of DMAS for focused studies. Please see the attached letter on DMAS letterhead authorizing our request.

The enclosed (password-protected) CD contains the name, recipient ID number, sex, and birth date for sampled members. By now, you should have received a password via e-mail from [name] that will enable you to read the CD. **Enrollees should be matched to the provider who most likely provided well child services during the review period of calendar year 2007.** Each enrollee was randomly selected from all Medicaid enrollees that met the study criteria. This study is not intended to evaluate individual providers of care, but rather the different delivery systems within the Medicaid program. The data collected on your members will be presented in aggregate, and not by individual MCO or provider.

Please provide a copy of the medical record for the sampled enrollees of your MCO. **For patients aged 15 months through – 27 months during 2007, we need the entire medical record from birth to present.** For all other patients, the following record components are required:

- All pages for service dates in 2007
- Face sheet
- Immunization record
- Medication list
- Laboratory results
- Problem lists
- Office visit note

Medical records must be submitted to MPRO by August 14, 2008. Please mail medical records to MPRO, Attention: [name] at the address above.

Thank you for again taking time to assist DMAS and MPRO in completing the immunization and well-child focused studies. If you have any questions regarding this request, feel free to contact me at [e-mail] or by telephone at [phone].

Sincerely,

[name]
Director, External Quality Review

Enclosures:
CD
DMAS memo



22670 Haggerty Road, Suite 100, Farmington Hills, MI 48335-2611 • (248) 465-7300 • Fax (248) 465-7428 • www.mpro.org

September 11, 2008

RE: AUTHORIZED REQUEST FOR MEDICAL RECORDS

RESPONSE DUE: September 17, 2008

Dear Medicaid/FAMIS Provider:

MPRO is conducting several statewide assessments on the care provided to Medicaid/FAMIS enrollees. Two of the assessments, childhood immunizations and well-child visits, necessitate the use of administrative data and data obtained through medical record abstraction. In order for the assessment to accurately reflect the extent of adherence to childhood immunization schedules and well-child visits, it is imperative that you provide us with the medical records requested in the enclosed list. MPRO is contracted by Virginia's Department of Medical Assistance Services (DMAS) to serve as the External Quality Review Organization (EQRO) and, as such, is authorized to request medical records on their behalf for the statewide assessments.

Please see attached letter from DMAS authorizing our request.

Your cooperation is requested in providing copies of your medical records for the patients included on the enclosed list. **For patients aged 15 months through 27 months during 2007, please send the entire medical record, from birth to present.** For all other patients, the following record components are required:

- | | |
|---------------------------------------|----------------------|
| ▪ All pages re: service dates in 2007 | ▪ Laboratory results |
| ▪ Face sheet | ▪ Problem lists |
| ▪ Immunization record | ▪ Office visit notes |
| ▪ Medication list | |

Each enrollee was randomly selected from all enrollees that met the criteria for each assessment. The assessments are not intended to evaluate individual providers of care, but rather the different delivery systems within the Medicaid and FAMIS programs.

Please return the enclosed patient list with the medical records and check the appropriate patient status. You are encouraged to fax medical records to MPRO at [phone], but they can also be mailed using the address provided. If you have any questions concerning the submission of the requested medical record information, please contact [name] at [phone].

Thank you for taking time to ensure that enrollees are receiving appropriate well child care and timely immunizations.

Sincerely,

[name]
Director, External Quality Review



September 11, 2008

Dear Medicaid/FAMIS Provider:

Virginia's Department of Medical Assistance Services' (DMAS) is responsible for administering the Medicaid and State Children's Health Insurance Program (SCHIP). The SCHIP program in Virginia is known as "Family Access to Medical Insurance Security" (FAMIS). In its efforts to monitor and continuously improve the care received by enrollees in Medicaid and FAMIS, DMAS has contracted with MPRO, an external quality review organization, to measure the extent of adherence to childhood immunization schedules and well-child visits.

In order for MPRO to adequately assess and report on the extent of compliance with immunization and well-child recommendations, **your timely response to MPRO's enclosed medical record request is imperative.** You are one of many providers that we are counting on in order for DMAS to have accurate and timely information on immunizations and well-child visits. Data collected from your medical records will be analyzed, synthesized and reported as aggregate numbers. All of the information, including your name, will be kept confidential.

DMAS has the legal authority to request medical records of Medicaid recipients as delineated in the following citations from The Code of Virginia, the Federal Register, the Medicaid Provider Participation Agreement, the Medicaid Physician Manual, and the Medicaid Application:

1. **The Medicaid Provider Participation Agreement** that you signed which states, "Access to records and facilities by authorized VMAP representatives...will be permitted upon reasonable request.
2. **The Medicaid Physician Manual Participation Requirements** which states, "Providers approved for participation in the Medical Assistance Program must perform the following activities as well as any other specified by DMAS: Furnish to authorized State and Federal personnel, in the form and manner requested, access to records and facilities".
3. **Code of Virginia § 32.1-46 Immunization of children against certain diseases; authority to share immunization records.** "For the purpose of protecting the public health by ensuring that each child receives age-appropriate immunizations, any physician, licensed institutional health care provider, local or district health department, and department of health may share immunization and child locator information, including, but not limited to, the month, day, and year of each administered immunization; the child's name, address, telephone number, birth date, and social security number; and the parent's names."
4. **Federal Regulation: 45 CFR Parts 160 through 164. Standards for Privacy of Individually Identifiable Health Information.** The new medical information privacy rule went into effect April 14, 2003. The rule applies different levels of consent requirements for patient-identified medical information. The least restrictive is a standard consent that may be signed that allows providers to share information for billing purposes, for health care operations, and a variety of other functions. The definitions of health care operations include, "Conducting quality assessment and improvement activities, including outcome evaluation and development of clinical guidelines, provided that the obtaining of generalized knowledge is not the primary purpose of any studies resulting from such activities; population-based activities relating to improving health or reducing health care costs, protocol development, case management and care coordination, contacting of health care providers and patients with information about treatment alternatives; and related functions that do not include treatment." The exception to this consent is psychotherapy notes, which will require a higher level, disclosure-specific authorization (as distinguished from *consent*) from the patient. This request for immunizations and well-child visit information falls under the category of *health operations*.
5. **Medicaid Application.** At the time that individuals apply for Medicaid, they sign the following statement: "I authorize release to the Department of Medical Assistance Services any information in any medical records pertaining to any service received by me or the individuals for whom I am applying for Medicaid or Title XXI State Children's Health Insurance Program."

Thank you for your cooperation in our efforts to track the number of children in Medicaid and FAMIS who are receiving regular well child care and immunizations.

Sincerely,

Douglas C. Hartman
Supervisor, HCS Systems & Reporting
Department of Medical Assistance Services

Appendix D – Numerators and Denominators

Vaccine	Immunization Rates - 2006											
	Fee-For-Service			MCO			PCCM			Combined		
	Num	Den	Rate	Num	Den	Rate	Num	Den	Rate	Num	Den	Rate
Diphtheria, tetanus, pertussis (DTaP)	191	321	59.50%	220	322	68.32%	110	178	61.80%	367	399	91.98%
Hepatitis B (HBV)	191	321	59.50%	223	322	69.25%	119	178	66.85%	371	399	92.98%
Haemophilus influenza type b (HiB)	234	321	72.90%	257	322	79.81%	144	178	80.90%	383	399	95.99%
Measles, mumps, rubella (MMR)	250	321	77.88%	264	322	81.99%	140	178	78.65%	382	399	95.74%
Inactivated poliovirus (IPV)	213	321	66.36%	236	322	73.29%	130	178	73.03%	381	399	95.49%
Varicella (VZV)	250	321	77.88%	262	322	81.37%	140	178	78.65%	387	399	96.99%
Pneumococcal conjugate (PCV)	178	321	55.45%	198	322	61.49%	107	178	60.11%	239	399	59.90%
Combination 2	162	321	50.47%	186	322	57.76%	95	178	53.37%	351	399	87.97%
Combination 3	144	321	44.86%	160	322	49.69%	87	178	48.88%	228	399	57.14%

Vaccine	Immunization Rates - 2006								
	FAMIS			FAMIS Plus			Combined		
	Num	Den	Rate	Num	Den	Rate	Num	Den	Rate
Diphtheria, tetanus, pertussis (DTaP)	229	339	67.55%	292	482	60.58%	367	399	91.98%
Hepatitis B (HBV)	229	339	67.55%	304	482	63.07%	371	399	92.98%
Haemophilus influenza type b (HiB)	267	339	78.76%	368	482	76.35%	383	399	95.99%
Measles, mumps, rubella (MMR)	273	339	80.53%	381	482	79.05%	382	399	95.74%
Inactivated poliovirus (IPV)	249	339	73.45%	330	482	68.46%	381	399	95.49%
Varicella (VZV)	274	339	80.83%	378	482	78.42%	387	399	96.99%
Pneumococcal conjugate (PCV)	207	339	61.06%	276	482	57.26%	239	399	59.90%
Combination 2	198	339	58.41%	245	482	50.83%	351	399	87.97%
Combination 3	169	339	49.85%	222	482	46.06%	228	399	57.14%

Vaccine	Immunization Rates - 2007											
	Fee-For-Service			MCO			PCCM			Combined		
	Num	Den	Rate	Num	Den	Rate	Num	Den	Rate	Num	Den	Rate
Diphtheria, tetanus, pertussis (DTaP)	198	321	61.68%	244	322	75.78%	152	190	80.00%	594	833	71.31%
Hepatitis B (HBV)	202	321	62.93%	260	322	80.75%	161	190	84.74%	623	833	74.79%
Haemophilus influenza type b (HiB)	245	321	76.32%	280	322	86.96%	179	190	94.21%	704	833	84.51%
Measles, mumps, rubella (MMR)	249	321	77.57%	284	322	88.20%	181	190	95.26%	714	833	85.71%
Inactivated poliovirus (IPV)	218	321	67.91%	273	322	84.78%	167	190	87.89%	658	833	78.99%
Varicella (VZV)	242	321	75.39%	284	322	88.20%	181	190	95.26%	707	833	84.87%
Pneumococcal conjugate (PCV)	188	321	58.57%	237	322	73.60%	157	190	82.63%	582	833	69.87%
Combination 2	167	321	52.02%	220	322	68.32%	137	190	72.11%	524	833	62.91%
Combination 3	148	321	46.11%	203	322	63.04%	126	190	66.32%	477	833	57.26%

Vaccine	Immunization Rates - 2007											
	FAMIS			SCHIP			FAMIS Plus			Combined		
	Num	Den	Rate	Num	Den	Rate	Num	Den	Rate	Num	Den	Rate
Diphtheria, tetanus, pertussis (DTaP)	257	351	73.22%	337	482	69.92%	594	833	71.31%	367	399	91.98%
Hepatitis B (HBV)	260	351	74.07%	363	482	75.31%	623	833	74.79%	371	399	92.98%
Haemophilus influenza type b (HiB)	296	351	84.33%	408	482	84.65%	704	833	84.51%	383	399	95.99%
Measles, mumps, rubella (MMR)	298	351	84.90%	416	482	86.31%	714	833	85.71%	382	399	95.74%
Inactivated poliovirus (IPV)	280	351	79.77%	378	482	78.42%	658	833	78.99%	381	399	95.49%
Varicella (VZV)	290	351	82.62%	417	482	86.51%	707	833	84.87%	387	399	96.99%
Pneumococcal conjugate (PCV)	248	351	70.66%	334	482	69.29%	582	833	69.87%	239	399	59.90%
Combination 2	226	351	64.39%	298	482	61.83%	524	833	62.91%	351	399	87.97%
Combination 3	209	351	59.54%	268	482	55.60%	477	833	57.26%	228	399	57.14%